

REMARKS/ARGUMENTS

Claim Status

Claims 1-6 are currently amended. Claims 7-11 are added. Claims 1-6 are amended for clarity and to correct informalities. Support can be found in the claims as originally filed. New claims 7-10 find support in original claims 1-3. New claim 11 finds support in the specification; pg. 20, [0065]. No new matter is believed to have been added. Upon entry of the amendment, Claims 1-11 will be active.

Claim Objections

Claim 2 is objected to for grammatical errors and for containing two sentences. Claim 2 has been amended to correct said errors. Withdrawal of these objections is requested.

Claim Rejections - 35 U.S.C. § 103

Claims 1-3, 5 and 6 are rejected under 35 U.S.C. § 103 as obvious over Yanagase (JP 09165554 A). Claims 4 and 5 are rejected under 35 U.S.C. § 103 as obvious over Yanagase, as applied to claims 1-3, 5 and 6 above, and further in view of Greigger (U.S. Patent No. 4,435,219) and the Admitted Prior Art.

The present invention provides for a coating composition which, when applied to a product, produces a transparently coated article having high stain-resistance, improved weather resistance and improved coating elongation. Specifically, the coating of the present invention comprising a coating component comprising a polymer, and colloidal silica having an average particle size of 1-60 nm, wherein the area of colloidal silica exposed at the coating surface occupying 35% or more of the coating surface. The above coating component

improves formability, weather resistance, water resistance, and freeze-thaw resistance, while the colloidal silica provides stain-resistance, anti-static properties, hardness, and weather resistance to said coating (*See* Specification; [0022-24]).

With respect to claims 1, 5 and 6, the Office recognizes that Yanagase does not disclose how much area the colloidal silica occupies on the surface coating (Official Action; pg. 4, lines 1-8). Nonetheless, the Examiner appears to take the view that simply because Yanagase discloses a coating composition that comprises an emulsion of a graft block copolymer and colloidal silica, Yanagase “inherently” discloses that an area of colloidal silica exposed at a coating surface occupies 35% or more of the coating surface. However, the examiner has no proof of this. Applicants note that according to MPEP 2112 (IV), the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). As noted by the court in *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323 (CCPA 1981), the mere fact that a certain thing may result from a given set of circumstances is not sufficient to prove inherency. Inherency may not be established by probabilities or possibilities. Something that is inherent must inevitably be the result each and every time.

It is by now well settled that the burden of establishing a *prima facie* case of inherency resides with the Patent and Trademark Office. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984), quoting *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967). Before an Examiner can switch the burden of proof of showing non-inherency to the applicant, the Examiner must provide some evidence or scientific reasoning to establish the reasonableness of the Examiner’s belief that the limitation is an inherent characteristic of the prior art. In this case, the Examiner has provided no such

evidence other than simply concluding that discloses a coating composition that comprises an emulsion of a graft block copolymer and colloidal silica (Official Action; pg. 3, lines 13-19).

Indeed, contrary to the unsupported conclusion in the Action, coating compositions that comprises an emulsion of a graft block copolymer and colloidal silica produce surface coatings with a wide range of exposed colloidal silica (As illustrated in the Comparative Example of the attached 37 C.F.R. § 1.132 Declaration, pg. 6). Thus, there is simply no disclosure in Yanagase of an area of colloidal silica exposed at a coating surface occupying 35% or more of the coating surface.

Nor is there any disclosure that would suggest one to select this specific degree of colloidal silica exposure based on Yanagase's deficient disclosure in this regard. Applicants point out that M.P.E.P. §2144.08 (Part II) states "[T]he fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness. *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994). On this basis, the rejection cannot be sustained.

Even if a *prima facie* case of obviousness can be established, Applicants demonstration in the attached 37 C.F.R. § 1.132 Declaration is sufficient to rebut the same. "Evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut *prima facie* obviousness. "Evidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a *prima facie* case of obviousness." No set number of examples of superiority is required. *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987)." Thus, the data in the 1.132 Declaration clearly illustrates that a coating composition comprising a polymer and colloidal silica, wherein the area of colloidal silica exposed at a coating surface occupying 35% or more of the coating surface, provides for

significant differences in stain resistance, water contact angle, and anti-static properties, which is enough to rebut a *prima facie* case of obviousness.

Specifically, Applicants direct the Examiner's attention to the comparison of Example 16 according the present invention and Comparative Aqueous Coating Composition A, based on example 5 of JP 9-165554, on pg. 6 of the 1.132 Declaration enclosed herewith. It can be seen from this data that the claimed invention, with an area of colloidal silica exposed at a coating surface occupying 35% or more of the coating surface, provides greatly improved stain resistance over the prior art composition with an area of exposed colloidal silica of only 16%.

Applicants submit that the results demonstrated in these comparisons clearly illustrate that, even if a *prima facie* case of obviousness can be established, Applicants demonstration is sufficient to rebut the same.

In view of the foregoing, withdrawal of these grounds of rejection over claims 1, 5 and 6 is requested.

With respect to claim 2, Yanagase does not disclose the use of *nonionic* emulsifiers. Rather, Yanagase discloses that two or more *anionic* emulsifiers may be used in combination [0046-53]. Moreover, in the Examples of Yanagase, only sodium dodecylbenzene sulfonate is used as an anionic emulsifier; and there is no disclosure of the anionic emulsifiers listed in claim 2 of the present invention. Accordingly, Yanagase does not disclose the use of the specific *anionic* emulsifiers listed in claim 2 and an *nonionic* emulsifier as presently claimed.

The Examiner is reminded that MPEP 2142 states:

The legal concept of *prima facie* obviousness is a procedural tool of examination which applies broadly to all arts. It allocates who has the burden of going forward with production of evidence in each step of the examination process. See *In re Rinehart*, 531 F.2d 1048, 189

USPQ 143 (CCPA 1976); *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Saunders*, 444 F.2d 599, 170 USPQ 213 (CCPA 1971); *In re Tiffin*, 443 F.2d 394, 170 USPQ 88 (CCPA 1971), *amended*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968). The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. If, however, the examiner does produce a *prima facie* case, the burden of coming forward with evidence or arguments shifts to the applicant who may submit additional evidence of nonobviousness, such as comparative test data showing that the claimed invention possesses improved properties not expected by the prior art. The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to render obvious the claimed invention.

In the present application, the Examiner has not met this initial burden. Specifically, in the outstanding Office Action the Examiner has not established where in the cited references, and upon what basis, the artisan would envision the use of a *nonionic* emulsifier, the combination of an *anionic* emulsifier and an *nonionic* emulsifier, or the specific *anionic* emulsifiers presently claimed.

Furthermore, even if a *prima facie* case of obviousness can be established, Applicants demonstration in the attached 37 C.F.R. § 1.132 Declaration is sufficient to rebut the same. Specifically, Comparative Aqueous Coating Composition A does not comprise an anionic emulsifier and a nonionic emulsifier, and as a result, the area of exposed colloidal silica of the comparative Example is only 16%. In contrast, Example 16 prepared with an anionic surfactant selected from the listing in claim 2, and a nonionic surfactant according to the present invention, provides for improved stain resistance, water contact angle, and anti-static properties over the prior art (37 C.F.R. § 1.132 Declaration, pg. 6).

In view of the foregoing, withdrawal of these grounds of rejection over claim 2 is requested.

With respect to claim 3, the Office recognizes that Yanagase does not disclose the ratio of co-polymerizable monomer and the radical polymerizable unit claimed by Applicants (Official Action; pg. 4, lines 1-8). The Office states that such a range could be achieved through routine optimization, however, Applicants submit that the demonstration in the attached Declaration is sufficient to rebut the same. “[E]vidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut *prima facie* obviousness. “Evidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a *prima facie* case of obviousness.” No set number of examples of superiority is required. *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987).” Thus, the data in the 1.132 Declaration clearly illustrates that a coating composition comprising a polymer comprising 4-20 parts by mass of a radical polymerizable unit, provides for significant differences in stain resistance, water contact angle, and anti-static properties, which is enough to rebut a *prima facie* case of obviousness.

In view of the foregoing, withdrawal of these grounds of rejection over claim 3 is requested.

Claims 4 and 5 are rejected under 35 U.S.C. § 103 as obvious over Yanagase, as applied to claims 1-3, 5 and 6 above, and further in view of Greigger (U.S. Patent No. 4,435,219) and the Admitted Prior Art.

With respect to claim 4, the Office recognizes that Yanagase does not disclose 0.5-20 parts by mass of an organic solvent having less than 0.8 of distribution coefficient of octanol/water. The Office relies on Greigger's disclosure of isopropanol to cure this deficiency (Col. 9, Example 1). However, Example 1 of Greigger discloses 70pbw of isopropanol, which is far beyond the 0.5-20 parts by mass of organic solvent according to

claim 4. Accordingly, Greigger does not cure the deficiencies of Yanagase, and is insufficient to establish a *prima facie* case of obviousness.

Furthermore, even if a *prima facie* case of obviousness can be established, Applicants maintain that the demonstration of improved stain resistance, water contact angle, and anti-static properties over the prior art in the attached 37 C.F.R. § 1.132 Declaration is sufficient to rebut the same as described above.

In view of the foregoing, Applicants request withdrawal of this rejection.

With respect to claim 5, Greigger fails to cure the deficiencies of Yanagase as described above. Specifically, Greigger fails to disclose an area of colloidal silica exposed at a coating surface occupying 35% or more of the coating surface. Accordingly, Applicants request withdrawal of this rejection.

Conclusion

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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